

Splicing Inhibitors to Overcome Drug Resistance in Melanoma

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Keywords: Biomarkers, Skin, Antisense & RNAi, RNA splicing, BRAF

Summary:

The National Cancer Institute seeks parties interested in collaborative research to co-develop methods to detect tumors that possess certain BRAF splicing isoforms susceptible to RNA splicing inhibitors.

Description of Technology:

Vemurafenib is a B-Raf enzyme inhibitor that causes cell death in melanoma tumor cells that possess a mutated B-Raf protein (V600E BRAF mutation); however, patients rapidly develop resistance. One mechanism for acquired resistance of these patients to BRAF inhibitors has been found to be mediated by the existence of BRAF (V600E) splicing variants that possess structural changes in BRAF that confer insensitivity to BRAF inhibitors.

Researchers at the [National Cancer Institute](#) have discovered that RNA splicing inhibitors can block the growth of vemurafenib-resistant tumors. Further, the researchers have also found that other types of tumors that possess BRAF splicing isoforms are susceptible to RNA splicing inhibitors.

Available for co-development collaborations are methods of using RNA splicing inhibitors to detect tumors that possess certain BRAF splicing isoforms susceptible to RNA splicing inhibitors.

Potential Commercial Applications:

- Potential therapeutic or diagnostic for cancer

Competitive Advantages:

- No discernable toxicity in mice

Inventor(s):

[Thomas Misteli](#) (NCI)

Development Stage:

-- Pre-clinical (in vivo)

Patent Status:

US (filed): Research Material-This technology will not be patented.

Contact Information:

Co-Development Opportunities:

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Related Opportunities:

E-264-2009, E-286-2012, E-283-2008